IN THE CLAIMS:

Please add the following new claims 6-87:

5. A tree-structured filter array having a plurality of levels of filter banks, the filter array comprising:

a first level of the plurality of levels comprising a filter bank having greater than two filters; and

a second level of the plurality of levels comprising a plurality of filter banks, wherein a first filter bank of the plurality of filter banks has a first number of filters and a second filter bank of the plurality of filter banks has a second number of filters, and wherein the first number of filters is different than the second number of filters.

6. The filter array of claim 5, wherein:

the first level comprises a filter bank having thirty two filters;

the second level comprises thirty two filter banks; and

two of the thirty two filter banks have eighteen filters and thirty of the thirty two filter banks have six filters.

7. The filter array of claim 5, wherein the filter array is adapted to process a sum of modulated carrier signals.

8. The filter array of claim 7, wherein the filter array is adapted to process the sum of modulated carrier signals by transforming the sum of modulated carrier signals into frequency domain symbols, wherein a first frequency domain symbol occupies a first bandwidth and a second frequency domain symbol occupies a second, different bandwidth.

9. The filter array of claim 7, wherein the sum of modulated carrier signals is transformed into frequency domain symbols, wherein a first frequency domain symbol occupies a first bandwidth and a second frequency domain symbol occupies a second, different bandwidth.

10. The filter array of claim 5, wherein at least one of the filter banks is adapted to generate polyphase components.

11. The filter array of claim 5, wherein the system is adapted to process an input signal by splitting the input signal into a plurality of non-uniform subbands.

12. A tree-structured filter array comprising:

a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters;

a first of the plurality of filter banks of one of the plurality of levels having a first number of filters; and

a second of the plurality of filter banks of the one of the plurality of levels having a second number of filters different from the first number of filters.

13. The filter array of claim 12, wherein:

the first level comprises a filter bank having thirty two filters;

the second level comprises thirty two filter banks; and

two of the thirty two filter banks have eighteen filters and thirty of the thirty two filter banks have six filters.

14. The filter array of claim 12, wherein the filter array is adapted to process a sum of modulated carrier signals.

15. The filter array of claim 14, wherein the filter array is adapted to process the sum of modulated carrier signals by transforming the sum of modulated carrier signals into frequency domain symbols, wherein a first frequency domain symbol occupies a first bandwidth and a second frequency domain symbol occupies a second, different bandwidth.

16. The filter array of claim 14, wherein the sum of modulated carrier signals is transformed into frequency domain symbols, wherein a first frequency domain symbol occupies a first bandwidth and a second frequency domain symbol occupies a second, different bandwidth.

17. The filter array of claim 12, wherein at least one of the filter banks is adapted to generate polyphase components.

18. The filter array of claim 12, wherein the system is adapted to process an input signal by splitting the input signal into a plurality of non-uniform subbands.

19. A tree-structured filter array comprising:

a plurality of filter banks, each of the plurality of filter banks having more than two filters;

a first of the plurality of filter banks having X filters;

a second of the plurality of filter banks having Y filters; and

a third of the plurality of filter banks having Z filters, wherein X, Y and Z are different numbers.

20. The filter array of claim 19, wherein the tree-structured array comprises one filter bank with 32 filters, two filter banks with 18 filters and 30 filter banks with six filters, wherein the two filter banks with 18 filters and the 30 filter banks with six filters are in the second level.

21. The filter array of claim 19, wherein the filter array is adapted to process a sum of modulated carrier signals.

22. The filter array of claim 21, wherein the filter array is adapted to process the sum of modulated carrier signals by transforming the sum of modulated carrier signals into frequency domain symbols, wherein a first frequency domain symbol occupies a first bandwidth and a second frequency domain symbol occupies a second, different bandwidth.

23. The filter array of claim 21, wherein the sum of modulated carrier signals is transformed into frequency domain symbols, wherein a first frequency domain symbol occupies a first bandwidth and a second frequency domain symbol occupies a second, different bandwidth.

24. The filter array of claim 19, wherein at least one of the filter banks is adapted to generate polyphase components.

25. The filter array of claim 19, wherein the system is adapted to process an input signal by splitting the input signal into a plurality of non-uniform subbands.

26. A tree-structured synthesis filter array comprising:

a plurality of levels of synthesis filter banks, each of the plurality of levels comprising at least one synthesis filter bank having more than two inputs;

a first level of the plurality of levels comprising a plurality of synthesis filter banks, a first synthesis filter bank of the plurality of synthesis filter banks having a first number of inputs and a second synthesis filter bank of the plurality of synthesis filter banks having a second number of inputs, and wherein the first number of inputs is different than the second number of inputs; and

a second level of the plurality of levels comprising a synthesis filter bank having greater than two inputs.

27. The synthesis filter array of claim 26, wherein:

the first level comprises thirty two synthesis filter banks, wherein two of the synthesis filter banks have eighteen inputs and thirty of the synthesis filter banks have six inputs; and

the second level comprises a synthesis filter bank having thirty two inputs.

28. The synthesis filter array of claim 26, wherein the system is adapted to process a compressed audio signal that has been decoded and dequantized.

29. The synthesis filter array of claim 26, wherein the system is adapted to process a sequence of symbols capable of being transmitted over a communications link.

30. The synthesis filter array of claim 26, wherein the tree-structured array is adapted to synthesize a decompressed audio signal.

31. The synthesis filter array of claim 26, wherein the system is adapted to modulate a first symbol onto a carrier having a first bandwidth, and a second symbol onto a carrier having a second, different bandwidth.

32. A tree-structured synthesis filter array comprising:

a plurality of levels of synthesis filter banks;

a first level of the plurality of levels comprising a plurality of synthesis filter banks, a first synthesis filter bank of the plurality of synthesis filter banks having a first number of filters and a second synthesis filter bank of the plurality of synthesis filter banks having a second number of filters, and wherein the first number of filters is different than the second number of filters; and

a second level of the plurality of levels comprising a synthesis filter bank having greater than two filters.

33. The synthesis filter array of claim 32, wherein:

the first level comprises thirty two synthesis filter banks,

two of the synthesis filter banks have eighteen filters and thirty of the synthesis filter banks have six filters; and

the second level comprises a synthesis filter bank having thirty two filters.

34. The synthesis filter array of claim 32, wherein the system is adapted to process a compressed audio signal that has been decoded and dequantized.

35. The synthesis filter array of claim 32, wherein the system is adapted to process a sequence of symbols capable of being transmitted over a communications link.

36. The synthesis filter array of claim 32, wherein the tree-structured array is adapted to synthesize a decompressed audio signal.

37. The synthesis filter array of claim 32, wherein the system is adapted to modulate a first symbol onto a carrier having a first bandwidth, and a second symbol onto a carrier having a second, different bandwidth.

38. A tree-structured synthesis filter array comprising:

a plurality of synthesis filter banks, each of the plurality of synthesis filter banks having more than two filters;

a first of the plurality of synthesis filter banks having X filters;

a second of the plurality of synthesis filter banks having Y filters; and

a third of the plurality of synthesis filter banks having Z filters, wherein X, Y and Z are different numbers.

39. The synthesis filter array of claim 38, wherein the tree-structured array comprises one filter bank with 32 filters, two filter banks with 18 filters and 30 filter banks with six filters, wherein the two filter banks with 18 filters and the 30 filter banks with six filters are in the second level.

40. The synthesis filter array of claim 38, wherein the system is adapted to process a compressed audio signal that has been decoded and dequantized.

41. The synthesis filter array of claim 38, wherein the system is adapted to process a sequence of symbols capable of being transmitted over a communications link.

42. The synthesis filter array of claim 38, wherein the tree-structured array is adapted to synthesize a decompressed audio signal.

43. The synthesis filter array of claim 38, wherein the system is adapted to modulate a first symbol onto a carrier having a first bandwidth, and a second symbol onto a carrier having a second, different bandwidth.

44. A signal processing system comprising:

a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters;

a first of the plurality of filter banks of one of the plurality of levels having a first number of filters; and

a second of the plurality of filter banks of the one of the plurality of levels having a second number of filters different from the first number of filters.

45. A signal processing system comprising:

a tree-structured array comprising a plurality of filter banks, each of the plurality of filter banks having more than two filters;

a first of the plurality of filter banks having X filters;

a second of the plurality of filter banks having Y filters; and

a third of the plurality of filter banks having Z filters, wherein X, Y and Z are different numbers.

46. A signal processing system comprising:

a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank;

a first of the plurality of levels comprising a filter bank having more than two filters; and

a second of the plurality of levels comprising a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters.

47. A signal processing system comprising:

a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one synthesis filter bank;

a first of the plurality of synthesis filter banks of one of the plurality of levels having a first number of inputs; and

a second of the plurality of synthesis filter banks of the one of the plurality of levels having a second number of inputs different from the first number of inputs.

48. A signal processing system comprising:

a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one synthesis filter bank;

a first of the plurality of levels comprising a plurality of synthesis filter banks, wherein a first of the plurality of synthesis filter banks has a first number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs; and

a second of the plurality of levels comprising a synthesis filter bank having more than two inputs.

49. A content distribution system comprising:

a distribution medium; and

a portion of a compressed audio file at least one of stored on or transmitted over the distribution medium, wherein the audio file was created using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of filter banks of one of the

plurality of levels has a first number of filters, and a second of the plurality of filter banks of the one of the plurality of levels has a second number of filters different from the first number of filters.

50. A content distribution system comprising:

a distribution medium; and

a compressed audio file at least one of stored on or transmitted over the distribution medium, wherein the audio file was created using a tree-structured array comprising a plurality of filter banks, each of the plurality of filter banks having more than two filters, wherein:

a first of the plurality of filter banks has X filters;

a second of the plurality of filter banks has Y filters; and

a third of the plurality of filter banks has Z filters, wherein X, Y and Z are different numbers.

51. An audio signal processing method comprising:

receiving an audio signal; and

splitting the audio signal into frequency components using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein:

a first of the plurality of filter banks of one of the plurality of levels has a first number of filters, and

a second of the plurality of filter banks of the one of the plurality of levels has a second number of filters different from the first number of filters.

52. The method of claim 51 wherein:

the tree-structured array comprises one filter bank with 32 filters, two filter banks with 18 filters and 30 filter banks with six filters, wherein the two filter banks with 18 filters and the 30 filter banks with six filters are in a the second level.

53. An audio signal processing method comprising:

receiving an audio signal; and

splitting the audio signal into sub-bands of unequal size using a tree-structured array comprising a plurality of filter banks, each of the plurality of filter banks having more than two filters, wherein:

a first of the plurality of filter banks has X filters,

a second of the plurality of filter banks has Y filters, and

a third of the plurality of filter banks has Z filters, wherein X, Y and Z are different numbers.

54. The method of claim 53 wherein:

the first filter bank has 32 filters;

the second filter bank has 18 filters; and

the third filter bank has 6 filters.

55. An audio signal processing method comprising:

receiving an audio signal; and

decomposing the audio signal into frequency components using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a second of the plurality of levels comprises a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters.

56. The method of claim 55 wherein:

a first level filter bank has 32 filters; and

the second of the plurality of levels comprises thirty two filter banks, wherein 2 of the filter banks have 18 filters and 30 of the filter banks have 6 filters.

57. An audio signal processing method comprising:

receiving a compressed audio signal that has been decoded and dequantized;

synthesizing a reconstructed audio signal using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two inputs, wherein a first of the plurality of synthesis filter banks of one of the plurality of levels has a first number of inputs and a second of the plurality of

synthesis filter banks of the one of the plurality of levels has a second number of inputs different from the first number of inputs.

58. An audio signal processing method comprising:

receiving a compressed audio signal;

decoding said compressed audio signal;

dequantizing said decoded signal;

synthesizing a reconstructed audio signal using a tree-structured array comprising a plurality of synthesis filter banks, each of the plurality of synthesis filter banks having more than two inputs, wherein:

a first of the plurality of synthesis filter banks has X inputs;

a second of the plurality of synthesis filter banks has Y inputs; and

a third of the plurality of synthesis filter banks has Z inputs, where X, Y and Z are different numbers.

59. An audio signal processing method comprising:

receiving a compressed audio signal that has been decoded and dequantized;

reconstructing a representation of an original audio signal using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of levels comprises a plurality of synthesis filter banks, wherein a first of the plurality of synthesis filter banks has a first number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs, and wherein a second of the plurality of levels comprises a synthesis filter bank having more than two inputs.

60. An audio signal processing method comprising:

receiving a compressed audio signal that has been decoded and dequantized;

synthesizing a reconstructed representation of an original audio signal using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of synthesis filter banks of one of the plurality of levels has a first number of filters and a second of the plurality of synthesis filter banks of the one of the plurality of levels has a second number of filters different from the first number of filters.

61. An audio compression method comprising:

receiving an audio signal;

splitting the audio signal into frequency components using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of filter banks of one of the plurality of levels has a first number of filters, and a second of the plurality of filter banks of the one of the plurality of levels has a second number of filters different from the first number of filters;

quantizing said frequency components; and

coding said quantized frequency components.

62. An audio compression method comprising:

receiving an audio signal;

decomposing the audio signal into frequency components using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters and a second of the plurality of levels comprises a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters;

quantizing said frequency components; and

coding said quantized frequency components.

63. An audio compression method comprising:

receiving an audio signal;

splitting the audio signal into frequency components, said frequency components representing the amplitude of the audio signal, using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, and a second of the plurality of levels comprises a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters;

quantizing said frequency components; and

coding said quantized frequency components.

64. An audio decompression method comprising:

receiving a compressed audio signal;

decoding and dequantizing said compressed audio signal;

synthesizing a reconstructed audio signal using a tree-structured array comprising a plurality of synthesis filter banks, each of the plurality of synthesis filter banks having more than two inputs, wherein:

a first of the plurality of synthesis filter banks has X inputs;

a second of the plurality of synthesis filter banks has Y inputs; and

a third of the plurality of synthesis filter banks has Z inputs, where X, Y and Z are different numbers.

65. An audio decompression method comprising:

receiving a compressed audio signal;

decoding said compressed audio signal;

dequantizing said decoded signal;

synthesizing a reconstructed audio signal using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of synthesis filter banks of one of the plurality of levels has a first number of filters; and

a second of the plurality of synthesis filter banks of the one of the plurality of levels has a second number of filters different from the first number of filters.

66. A program product comprising:

an audio signal processing program, said audio signal processing program including a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a second of the plurality of levels comprises a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters; and

a signal bearing media bearing said audio signal processing program.

67. A program product comprising:

an audio signal processing program, said audio signal processing program including: a tree-structured array comprising a plurality of filter banks, each of said plurality of filter banks having more than two filters, a first filter bank of said plurality of filter banks having X filters, a second filter bank of said plurality of filter banks having Y filters, and a third filter bank having Z filters, where X, Y and Z are different numbers; and

a signal bearing media bearing said audio signal processing program.

68. A program product comprising:

an audio signal processing program, said audio signal processing program including: a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two inputs, wherein a first of the plurality of synthesis filter banks of one of the plurality of levels has a first number of inputs; and a second of the plurality of synthesis filter banks of the one of the plurality of levels has a second number of inputs different from the first number of inputs; and

a signal bearing media bearing said audio signal processing program.

69. A program product comprising:

an audio signal processing program, said audio signal processing program including: a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of synthesis filter banks has a first number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs, and wherein a second of the plurality of levels comprises a synthesis filter bank having more than two inputs; and

a signal bearing media bearing said audio signal processing program.

70. An information storage media having instructions for splitting an audio signal comprising:

information that is capable of using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, and a second of the plurality of levels comprises a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters.

71. An information storage media having instructions for performing a method of processing an audio signal comprising:

information that stores a tree-structured array comprising a plurality of filter banks, each of the plurality of filter banks having more than two filters, wherein

a first of the plurality of filter banks has X filters,

a second of plurality of filter banks has Y filters,

a third of the plurality of filter banks has Z filters; and

wherein X, Y and Z are different numbers.

72. An information storage media having instructions for performing a method of processing an audio signal comprising:

information that implements a tree-structured array to process the audio signal, said tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, and a second of the plurality of levels comprises a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters.

73. An information storage media having instructions for processing an audio signal comprising:

information to operate a tree-structured array comprising a plurality of filter banks, each of the plurality of filter banks having more than two filters, wherein

a first of the plurality of filter banks has X filters;

a second of plurality of filter banks has Y filters; and

a third of the plurality of filter banks has Z filters; and

wherein X, Y and Z are different numbers.

74. An information storage media having instructions for performing a method of processing a compressed audio signal that has been decoded and dequantized comprising:

information that is capable of using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of levels comprises a plurality of synthesis filter banks, wherein a first of the plurality of synthesis filter banks has a first

number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs, and wherein a second of the plurality of levels comprises a synthesis filter bank having more than two inputs.

75. An information storage media having instructions for processing a compressed audio signal comprising:

information decodes said compressed audio signal;

information that dequantizes said decoded signal;

information that implements a tree-structured array comprising a plurality of synthesis filter banks, each of the plurality of synthesis filter banks having more than two inputs, wherein a first of the plurality of synthesis filter banks has X inputs, a second of the plurality of synthesis filter banks has Y inputs, and a third of the plurality of synthesis filter banks has Z inputs, where X, Y and Z are different numbers.

76. An information storage media having instructions for processing a compressed audio signal that has been decoded and dequantized comprising:

information that stores a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of levels comprises a plurality of synthesis filter banks, wherein a first of the plurality of synthesis filter banks has a first number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs, and wherein a second of the plurality of levels comprises a synthesis filter bank having more than two inputs.

77. An information storage media having instructions for processing a compressed audio signal that has been decoded and dequantized comprising:

information that operates a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of levels comprises a plurality of synthesis filter banks, wherein a first of the plurality of synthesis filter banks has a first number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs, and wherein a second of the plurality of levels comprises a synthesis filter bank having more than two inputs.

78. A computer-readable medium having stored thereon a data structure relating to 32 frequency sub-bands of an audio signal comprising:

a first portion containing data representing 36 frequency sub-bands associated with 2 of the 32 frequency sub-bands having the lowest frequencies; and

a second portion containing data representing 180 frequency sub-bands associated with 30 of the 32 frequency sub-bands having the lowest frequency.

79. An audio signal processing protocol comprising:

splitting the audio signal using a tree-structured array comprising a plurality of filter banks, each of the plurality of filter banks having more than two filters;

a first of the plurality of filter banks having X filters;

a second of the plurality of filter banks having Y filters; and

a third of the plurality of filter banks having Z filters, wherein X, Y and Z are different numbers.

80. An audio compression protocol comprising:

receiving an audio signal;

splitting the audio signal into frequency components using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank;

a first of the plurality of levels comprising a filter bank having more than two filters; and

a second of the plurality of levels comprising a plurality of filter banks, wherein a first of the plurality of filter banks has a first number of filters and a second of the plurality of filter banks has a different number of filters from the first number of filters;

quantizing said frequency components; and

removing redundancy from said quantized frequency components using coding.

81. A signal decompression protocol comprising:

receiving a compressed audio signal that has been decoded and dequantized; and

synthesizing the audio signal using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of levels comprises a plurality of synthesis filter banks, wherein a first of the plurality of synthesis filter banks has a first number of inputs and a second of the plurality of synthesis filter banks has a second number of inputs different from the first number of inputs, and wherein a second of the plurality of levels comprises a synthesis filter bank having more than two inputs.

82. A protocol for processing compressed audio comprising:

decoding and dequantizing the compressed audio signal; and

synthesizing the decoded and dequantized audio signal using a tree-structured array of filter banks, where the number of filters in each filter bank is greater than two, and the number of filters in at least one of the filter banks is different from the number of filters in another filter bank within a same layer of the array.

83. A compressed audio file generated according to a process comprising:

receiving an audio signal;

splitting the audio signal into frequency components using a tree-structured array comprising a plurality of synthesis filter banks, each of the plurality of synthesis filter banks having more than two inputs, wherein:

a first of the plurality of synthesis filter banks has X inputs;

a second of the plurality of synthesis filter banks has Y inputs; and

a third of the plurality of synthesis filter banks has Z inputs, where X, Y and Z are different numbers.

84. A data structure recorded on a media comprising:

audio data that has been:

split into frequency components using a tree-structured array comprising a plurality of levels, each of the plurality of levels comprising at least one filter bank having more than two filters, wherein a first of the plurality of filter banks of one of the plurality of

levels has a first number of filters, and a second of the plurality of filter banks of the one of the plurality of levels has a second number of filters different from the first number of filters;

quantized; and

coded, resulting in a compressed audio data structure.

85. An audio signal processing system comprising:

a receiver that receives an audio signal;

a tree-structured array that splits said audio signal into unequal subbands, said tree structured array comprising a plurality of levels, each of the plurality of levels comprising at least one synthesis filter bank, wherein a first of the plurality of synthesis filter banks of one of the plurality of levels having a first number of inputs, and a second of the plurality of synthesis filter banks of the one of the plurality of levels having a second number of inputs different from the first number of inputs.

86. An audio compression system comprising:

a receiver that stores a portion of an audio signal;

a tree-structured array that splits said audio signal into frequency components, said tree structured array comprising a plurality of levels, each of the plurality of levels comprising at least one synthesis filter bank, wherein a first of the plurality of synthesis filter banks of one of the plurality of levels having a first number of inputs, and a second of the plurality of synthesis filter banks of the one of the plurality of levels having a second number of inputs different from the first number of inputs;

a quantizer that replaces each of said frequency components by one of a plurality of approximations thereto; and

a coder that removes redundancy from said quantized frequency components.

87. An audio decompression system comprising:

a receiver that stores a portion of a compressed audio signal;

a decoder that recovers quantized signal values;

a dequantizer that generates approximations to filtered signal values;

a synthesis filter array that synthesizes a reconstructed audio signal from said approximations into filtered signal values using a tree-structured array comprising a plurality of synthesis filter banks, each of the plurality of synthesis filter banks having more than two inputs, wherein a first of the plurality of synthesis filter banks has X inputs, a second of the

plurality of synthesis filter banks has Y inputs, and a third of the plurality of synthesis filter banks has Z inputs, where X, Y and Z are different numbers.